

Faunistic diversity of Vrachanski Balkan Nature Park, a synopsis

DIMITAR BECHEV, DILIAN GEORGIEV

Abstract. All the information on the animal species diversity of the Vrachanski Balkan Nature Park included in first and second parts of this issue was summarized. A total of 2290 species from Vrachanski Balkan Nature Park and some more 81 species from the region of Vrachanska Planina Mts., out of the park borders are recorded. From all, 348 are new records to the park and the mountain, and 354 species are of conservation importance. The local endemics are 21 species and 5 subspecies, 19 species and 2 subspecies are Bulgarian endemics, and 27 species and 16 subspecies are Balkan endemics. Almost all of the local endemics (20 species and 5 subspecies) are troglobites (14 sp.) and stygobites (6 sp.). Most of the troglobites are also endemics, and/or preglacial relicts.

Key words: fauna, diversity, endemics, Bulgaria.

Introduction

Till the beginning of 21st century there were no any broad scale investigations on the fauna of Vrachanski Balkan Mts. Because of the presence of large karstic areas with many caves the attention of the zoologists was paid mainly there. Consequently a lot of information was obtained about the invertebrate underground fauna. Later, at the beginning of 21st century along the activities considering the management plan of the nature park there a synopsis of all data about the faunal diversity was made. Following animal groups were mainly considered: Mollusca, Araneae, Myriapoda, Orthoptera, Lepidoptera, Diptera and Aves. It was presented in the Management plan of Nature Park “Vrachanski Balkan” but not officially published. Some of the information together with new, original studies was included in the first part of “Faunistic Diversity of Vrachanski Balkan Nature Park” (Bechev & Georgiev 2015), and this issue (Bechev & Georgiev 2019).

All the information on the animal species diversity of the Vrachanski Balkan Nature Park was summarized, including the both special issues of ZooNotes (Bechev & Georgiev 2015, 2019). Also the unpublished data in the Management plan of Nature Park “Vrachanski Balkan” (2011) was used.

A big part of Vrachanska Planina Mts. is situated in the borders of the Vrachanski Balkan Nature Park. Out of the park are mostly the lowest peripheral mountain parts and territories at urban areas and roads. In the old literature the collection localities are often not pointed exactly and it is difficult to know if they are out or in the park’s territory, or even the mountain. However, possibly only a few fish and freshwater molluscs species reported for the rivers at the mountain borders does not inhabit the park area. That’s why there are no any vast differences between the fauna of both the mountain and the park.

First data on the fauna of Vrachanski Balkan Mountains

The very first information concerning the fauna of Vrachanska Planina Mts. is this in the article “Gli aracnidi Turchi” of the Italian researcher Pietro Pavesi (Pavesi 1876). In this paper there are 10 spider species reported for Vratsa (possibly the region of Vratsa Town), including and the species *Argiope bruennichi*.

First Bulgarians who published faunal data about the area are Yoakimov (1904) for Mezdra (Bechev & Pavlova 2016) and Nedelkov (1908) for Vratsa (Popov & Chobanov 2016).

The first, new to science animal species described from Vrachanska Planina Mts. is the eyeless carabid beetle *Pheggomisetes bureschi* (Fig. 1) from Ledenika Cave (Knirsh 1923).

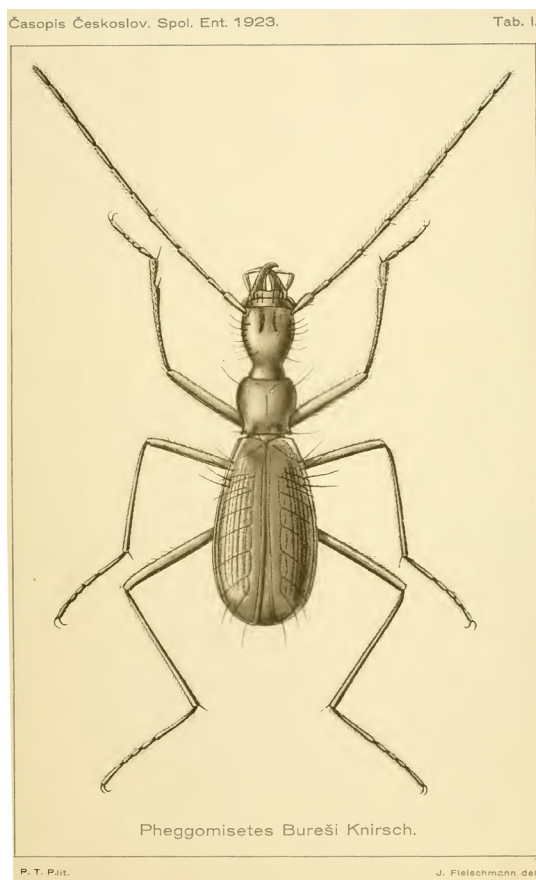


Fig. 1. *Pheggomisetes bureschi*, original drawing by Knirsh (1923).

Current gaps in the faunal knowledge of the area

In the both special issues of ZooNotes about this area we didn't manage to include papers about some animal species groups as Protozia, Nematoda, Acaromorpha, Neuroptera, Trichoptera, Hemiptera, Coleoptera: Curculionidae, Lepidoptera and other.

We consider that excluding Lepidoptera (information on which are included in the current issue) the rest the animal groups are poorly studied in the region.

Results and discussion

All the information on the animal species diversity of the Vrachanski Balkan Nature Park was summarized, including the both special issues of ZooNotes. A total of 2290 species from Vrachanski Balkan Nature Park and some more 81 species from the region of Vrachanska Planina Mts., out of the park borders are recorded. (Table 1, 2). From all, 348 are new records to the park and the mountain and 354 species are of conservation importance.

ENDEMICIS

The local endemics for the park are 21 species and 5 subspecies, 19 species and 2 subspecies are Bulgarian endemics, and 27 species and 16 subspecies are Balkan endemics. Almost all of the local endemics (20 species and 5 subspecies) are troglobites (14 sp.) and stygobites (6 sp.). Most of the endemic troglobites are and preglacial relicts, e.g. *Sphaeromides bureschi* and *Tricyphoniscus bureschi* (Crustacea: Isopoda), *Paralola buresi* (Opiliones), *Trachysphaera lakatnicensis* (Mydiapoda: Diplopoda) (Beron 2016), *Centromerus bulgarianus* (Aranei) (Deltshv & Lazarov 2016) and others.

Table 1. Taxonomic diversity of the investigated groups in Vrachanski Balkan Nature Park (VBNP).

Taxa	Number species in VBNP	Number species in Bulgaria*	Local endemic species and subspecies	Species with conservation importance	References
Protozoa	6	1607	-	-	[9]
Plathelminthes	20	313	-	-	[30]
Nematoda	7	1007	-	-	[9]
Nematomorpha	1	7	-	-	[2]
Acanthocephala	4	52	-	-	[14]
Annelida	8	288	-	-	[24], [9]
Gastropoda	102	373	4	31	[12], [20], [22]
Bivalvia	2	74	-	-	[20]
Tardigrada	6	20	-	-	[19]

[Table 1. Continued ▼]

[Table 1. Continued ▼]

Taxa	Number species in VBNP	Number species in Bulgaria*	Local endemic species and subspecies	Species with conservation importance	References
Crustacea	41	1056	2	-	[9], [34]
Scorpiones	1	5	-	-	[17], [9]
Pseudoscorpiones	10	59	3	-	[9], [40]
Opiliones	10	61	1	-	[9]
Araneae	110	998	-	-	[40], [13]
Acaromorpha	11	1583	-	-	[9]
Myriapoda	38	222	2	-	[42]
Diplura	3	11	-	-	[9]
Collembola	13	208	-	-	[9]
Thysanura	1	4	-	-	[9]
Ephemeroptera	18	102	-	-	[46]
Odonata	10	68	-	3	[36], [3]
Plecoptera	20	101	-	27	[45]
Blattodea	1	16	-	-	[41]
Manthodea	1	4	-	-	[41]
Orthoptera	79	225	-	1	[41]
Psocoptera	11	33	-	-	[23]
Coleoptera	401	6000	8/5	4	[6], [39], [9], [44], [25]
Raphidioptera	1	14	-	-	**
Hymenoptera	185	4000	-	-	[1], [29]
Trichoptera	30	258	-	-	[16], [9]
Lepidoptera	214	2900	-	13	[48]
Siphonaptera	4	75	-	-	[9]
Diptera	625	3500	1	-	[9], [7], [18], [27]

Arthropoda

[Table 1. Continued ▼]

Taxa	Number species in VBNP	Number species in Bulgaria*	Local endemic species and subspecies	Species with conservation importance	References
Amphibia	11	19	-	11	[31]
Reptilia	16	37	-	16	[31]
Aves	208	428	-	192	[SD]
Mammalia	61	97	-	58	[33], [21], [38], [15]
Total number	2290	26042	21/5	354	

* According Hubenov (2008).

** Bechev, unpublished observation.

Table 2. Number of species from the region of Vrachanska Planina Mts., out of the park borders.

Taxa	Number of species	References
Coleoptera	17	[25], [39]
Diptera	55	[27]
Pisces	9	[11], [37]
Total number	81	

Table 3. Endemic species and subspecies of the investigated groups in Vrachanski Balkan Nature Park (VBNP). Abbreviations: + or +/- species; /+ – subspecies; **VRE** – Vrachanska Planina Mts. endemic; **BGE** – Bulgarian endemic; **BPE** – Balkan Peninsula endemic; **Vr_Ir** – Bulgarian endemic known from Vrachanska Mts. and Iskar River Gorge only.

Taxa	aquatic	stygobites	terrestrial	troglobites	VRE	BGE	BPE	Referen- ces
GASTROPODA	4	4	24	-	4	9	12/5	
HYDROBIIDAE								
<i>Belgrandiella hesssei</i> Wagner, 1927	+	+			+			[20]
<i>Belgrandiella pussilla</i> Angelov, 1959	+	+			+			[20]
<i>Bythiospeum bureschi</i> (Wagner, 1927)	+	+			+			[20]
<i>Kolevia bulgarica</i> Georgiev & Glöer, 2015	+	+			+			[20], [22]
AGRIOLIMACIDAE								
<i>Deroceras zilchi</i> Grossu 1969			+			+		[12]
ARGNIDAE								
<i>Agardhiella langaleta</i> Subai 2011			+			Vr_Ir		[12]
<i>Agardhiella macrodonta</i> (P. Hesse 1916)			+				+	[12]
<i>Agardhiella parreyssii</i> (L. Pfeiffer 1848)			+				+	[12]
CHONDRINIDAE								
<i>Chondrina arcadica bulgarica</i> H. Nordsieck 1970			+				/+	[12]

[Table 3. Continued ▼]

[Table 3. Continued ▼]

Taxa	aquatic	stygobites	terrestrial	troglobites	VRE	BGE	BPE	Referen- ces
<i>Granaria frumentum hungarica</i> (M. von Kimakowicz 1890)			+				/+	[12]
CLAUSILIIDAE								
<i>Alinda biplicata euptychia</i> (Ehrmann 1960)			+				/+	[12]
<i>Alinda vrazzatica</i> (Likharev 1972)			+			Vr_Ir		[12]
<i>Bulgarica hiltrudae</i> H. Nordsieck. 1974			+			Vr_Ir		[12]
<i>Bulgarica vamensis</i> (L. Pfeiffer 1848)			+				+	[12]
<i>Macedonica frauenfeldi regia</i> H. Nordsieck 1974			+			/	+ / +	[12]
						Vr_Ir		
<i>Macedonica frauenfeldi sigma</i> (Westerlund 1884)			+				/+	[12]
<i>Macedonica pinteri</i> Sajo 1968			+					[12]
<i>Vestia ranojevici</i> (Pavlovic 1912)			+			Vr_Ir	+	[12]
HELICIDAE								
<i>Cattania balcanica</i> (L. Pfeiffer 1843)			+				+	[12]
<i>Cattania trizona</i> (Rossmässler 1835)			+				+	[12]
<i>Chilostoma pelia</i> (P. Hesse 1912)			+			+		[12]
HELICODONTIDAE								
<i>Lindholmiola pirtinensis</i> S.H.F. Jaeckel 1954			+				+	[12]
HYGROMIIDAE								
<i>Candidula rhabdotoides</i> (A. J. Wagner 1928)			+				+	[12]

[Table 3. Continued ▼]

[Table 3. Continued ▼]

Taxa	aquatic	stygobites	terrestrial	troglobites	VRE	BGE	BPE	Referen- ces
MILACIDAE								
<i>Milax parvulus</i> Wiktor 1968			+			+		[12]
<i>Tandonia serbica</i> (H. Wagner 1931)			+				+	[12]
PRISTILOMATIDAE								
<i>Vitreana neglecta</i> Damjanov & L. Pinter 1969			+				+	[12]
PYRAMIDULIDAE								
<i>Pyramidula cephalonica</i> (Westerlund 1898)			+				+	[12]
STROBILOPSIDAE								
<i>Aspasita bulgarica</i> Subai & Dedov 2008			+			Vr_Ir		[12]
CRUSTACEA	2	2	-	-	2	-	-	
HARPACTICOIDA								
<i>Elaphoidella balkanica</i> Apostolov 1992	+	+			+			[34]
ISOPODA								
<i>Protelsonia lakatnicensis</i> (Buresch & Gueorguiev 1962)	+	+			+			[34]
PSEUDOSCORPIONES								
<i>Balkanoroncus hadzii</i> Harvey, 1990	-	-	3	3	3	-	-	[9], [40]

[Table 3. Continued ▼]

[Table 3. Continued ▼]

Taxa	aquatic	stygobites	terrestrial	troglobites	VRE	BGE	BPE	Referen- ces
<i>Neobisium (Heoblothrus) beroni</i> Beier, 1963			+	+	+			[9], [40]
<i>Roncus mahnerti</i> Čurčić et Beron, 1981			+	+	+			[9], [40]
OPILIONES	-	-	2	2	1	1	-	
<i>Paralola buresi</i> Kratochvíl, 1951			+	+	+			[9]
<i>Paranemastoma (Buresiolla) bureschi</i> (Roewer, 1926)			+	+		+		[9]
ARANEAE	-	-	7	1	-	3	4	
AGELENIDAE								
<i>Inermocoelotes jurinitschi</i> (Drensky, 1915)			+			+		[13]
<i>Inermocoelotes karlinski</i> (Kulczyński, 1906)			+				+	[13]
LINYPHIIDAE								
<i>Antrohyphantes sophianus</i> (Drensky, 1931)			+			+		[13]
<i>Centromerus bulgarianus</i> (Drensky, 1931)			+	+		+		[13]
<i>Centromerus lakatnikensis</i> (Drensky, 1931)			+				+	[13]
<i>Pallidiphantes istrianus</i> Kulczyński, 1914			+				+	[13]
ZODARIIDAE								
<i>Zodarium pirini</i> Drensky, 1921			+				+	[13]

[Table 3. Continued ▼]

[Table 3. Continued ▼]

Taxa	aquatic	stygobites	terrestrial	troglobites	VRE	BGE	BPE	Referen- ces
MYRIAPODA	-	-	9	5	2	4	4	
CHILOPODA								
<i>Lithobius illyricus</i> Latzel, 1880			+				+	[42]
<i>Lithobius lakatnicensis</i> Verhoeff, 1926			+	+			+	[42]
DIPLOPODA								
<i>Brachydesmus radewi</i> Verhoeff, 1926			+			+		[42]
<i>Bulgarosoma bureschi</i> Verhoeff, 1926			+	+	+			[42]
<i>Balkanopetalum armatum</i> Verhoeff, 1926			+			+		[42]
<i>Calipodella fasciata</i> (Latzel, 1882)							+	[42]
<i>Typhloiulus bureschi</i> Verhoeff, 1926			+	+		+		[42]
<i>Typhloiulus longipes</i> Strasser, 1973			+	+	+			[42]
<i>Balkanophoenix borisi</i> Verhoeff, 1937			+	+		+		[42]
<i>Pachyiulus cattiarensis</i> (Latzel, 1884)			+				+	[42]
ORTHOPTERA	-	-	5	-	-	1	3/1	
TETTIGONIIDAE								
<i>Psorodonotus fieberi</i> (Fieber, 1853)			+				+	[41]
<i>Pholidoptera aptera karnyi</i> Ebner, 1908			+				/+	[41]

[Table 3. Continued ▼]

[Table 3. Continued ▼]

Taxa	aquatic	stygobites	terrestrial	troglobites	VRE	BGE	BPE	Referen- ces
<i>Tettigonia balcanica</i> Chobanov & L-Darcemont, 2014			+				+	[41]
PHANEROPTERIDAE								
<i>Isophya miksici</i> Peshev, 1985			+			+		[41]
<i>Ancistrura nigrovittata</i> (Brunner von Wattenwyl, 1878)			+				+	[41]
COLEOPTERA: Carabidae	-	-	23	12	8/5	1/2	2/7	
<i>Carabus (Tachypus) cancellatus intermedius</i> Dejean, 1826			+				/+	[44]
<i>Carabus (Trachycarabus) scabriusculus bulgarus</i> Lapouge, 1908			+				/+	[44]
<i>Carabus (Megodontus) violaceus azureus</i> Dejean, 1826			+				/+	[44]
<i>Cychrus semigranosus balcanicus</i> Hopffgarten, 1881			+				/+	[44]
<i>Pheggomisetes bureschi</i> (Knirsch, 1923)			+	+	+			[44]
<i>Pheggomisetes globiceps georgievi</i> Z. Karaman, 1958			+	+	/+		+/	[44]
<i>Pheggomisetes globiceps lakatnicensis</i> Jeannel, 1928			+	+	/+			[44]
<i>Pheggomisetes globiceps mladenovi</i> V. B. Guéorguiev, 1964			+	+	/+			[44]
<i>Pheggomisetes globiceps radevi</i> V. B. Guéorguiev, 1964			+	+	/+			[44]
<i>Pheggomisetes radevi radevi</i> Knirsch, 1924			+	+	+/+			[44]
<i>Pheggomisetes radevi ilchevi</i> Knirsch, 1924			+	+	+			[44]
<i>Pheggomisetes radevi tranteevi</i> V. B. Guéorguiev, 1964			+	+	+			[44]
<i>Duvalius (Paraduvalius) beroni</i> V. B. Guéorguiev, 1971			+	+	+			[44]

[Table 3. Continued ▼]

[Table 3. Continued ▼]

Taxa	aquatic	stygobites	terrestrial	troglobites	VRE	BGE	BPE	Referen- ces
<i>Duvalius (Paraduvalius) papasoffi</i> (Mandl, 1942)			+	+	+			[44]
<i>Duvalius (Paraduvalius) zivkovi</i> (Knirsch, 1925)			+	+	+			[44]
<i>Pterostichus (Parahaptoderus) vecors</i> Tschitschérine, 1897			+			+		[44]
<i>Pterostichus (Morphnosoma) melanarius bulgaricus</i> (Lutshnik, 1915)			+			/+		[44]
<i>Pterostichus (Feronidius) melas depressus</i> (Dejean, 1828)			+				/+	[44]
<i>Pterostichus (Pterostichus) bruckii</i> Schaum, 1859			+				+	[44]
<i>Pterostichus (Rambousekiella) ledenikensis</i> (Knirsch, 1925)			+	+	+			[44]
<i>Molops (Molops) alpestris kalofericus</i> Mlynář, 1977			+			/+		[44]
<i>Molops (Molops) piceus bulgaricus</i> Mařan, 1938			+				/+	[44]
<i>Tapinopterus (Tapinopterus) cognatus winkleri</i> Mandl, 1936			+				/+	[44]
TRICHOPTERA								
<i>Odontocerum hellenicum</i> Malicky, 1972	-	-	1	-	-	-	1	[16]
LEPIDOPTERA								
<i>Zerynthia cerisy ferdinandi</i> (Stichel, 1907)	-	-	2	-	-	-	/2	[48]
<i>Euchloe ausonia graeca</i> (Verity, 1925)			+				/+	[48]

[Table 3. Continued ▼]

[Table 3. Continued ▼]

Taxa	aquatic	stygobites	terrestrial	troglobites	VRE	BGE	BPE	Referen- ces
DIPTERA	-	-	2	-	1	-	1	
MYCETOPHILIDAE								
<i>Ectrepesthoneura ledenikiensis</i> Bechev, 1988			+				+	[7]
<i>Acnemia vrazzatica</i> Bechev, 1985			+		+			[7]
MAMMALIA	-	-	1	-	-	-	/1	
<i>Mustela nivalis galinhias</i> (Bate, 1905)			+				/+	
Total	6	6	79	23	21/5	19/2	27/16	

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Authors' addresses:

DIMITAR BECHEV

Department of Zoology
University of Plovdiv, Tzar Assen Str. 24,
BG-4000 Plovdiv, Bulgaria,
dbechev@abv.bg

DILIAN GEORGIEV

Department of Ecology and
Environmental Conservation,
University of Plovdiv, Tzar Assen Str. 24,
BG-4000 Plovdiv, Bulgaria,
diliangeorgiev@abv.bg

Фаунистично разнообразие на Природен парк Врачански Балкан – обобщение

ДИМИТЪР БЕЧЕВ, ДИЛЯН ГЕОРГИЕВ

(Резюме)

Обобщени са данните за фаунистичното разнообразие на Природен парк Врачански Балкан. В първата и втората част на изданието са включени данни за 2290 вида животни от Природен парк Врачански Балкан и още 81 от Врачанска планина, извън границите на парка. От тях 348 вида са нови за парка и планината, 354 вида са с консервационна значимост.

Локални ендемити за парка са 21 вида и 5 подвида, 19 вида и 2 подвида са български ендемити и 27 вида и 16 подвида балкански ендемити. Почти всички от локалните ендемити (20 вида и 5 подвида) са троглобионти (14 вида) и стигобионти (6 вида). Голяма част от троглобионтните ендемити са също и preglacial relicts, e.g. *Sphaeromides bureschi* and *Tricyphoniscus bureschi* (Crustacea: Isopoda), *Paralola buresi* (Opiliones), *Trachysphaera lakatnicensis* (Mydiapoda: Diplopoda), *Centromerus bulgarianus* (Aranei) и др.